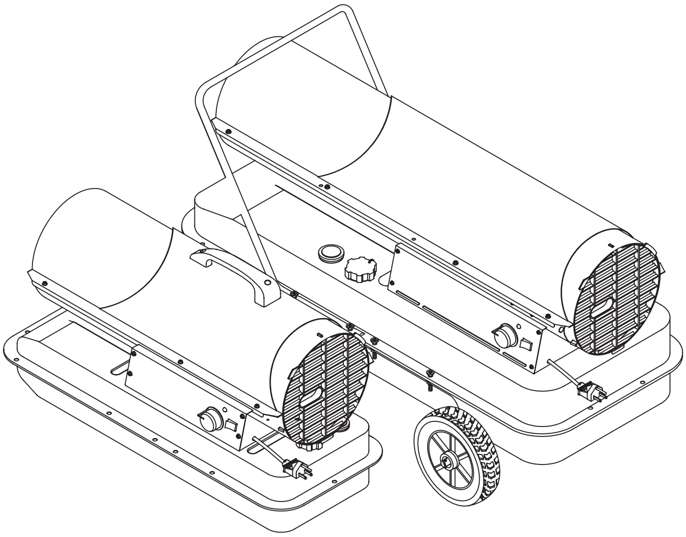
PORTABLE

FORCED AIR HEATERS

"USER'S MANUAL"



Dyna-Glo®

LISTED

MODEL : **RMC-KFA45T, RMC-KFA65T, RMC-KFA120T RMC-KFA170T, RMC-KFA210T**

Before the first use of this heater, please read this USER'S MANUAL very carefully. This USER'S MANUAL has been designed to instruct you as to the proper manner in which to assemble, maintain, store, and most importantly, how to operate the heater in a safe and efficient manner. Please keep this manual for future reference.

CFM RMC INTERNATIONAL
3501 W. HOWARD ST.,
SKOKIE, IL 60076
1-800-527-4948

NEVER LEAVE THE HEATER UNATTENDED WHILE BURNING!

DANGER - IMPROPER USE OF THIS HEATER CAN RESULT IN SERIOUS INJURY OR DEATH FROM BURNS, FIRE, EXPLOSION, ELECTRICAL SHOCK AND/OR CARBON MONOXIDE POISONING.

WARNINGS:

1. RISK OF INDOOR AIR POLLUTION!

- **Use this heater only in well ventilated areas.** Provide at least a three-square foot (2,800 sq. cm.) opening of fresh outside air for each 100,000 BTU/hr. of heater rating.
- People with breathing problems should consult a physician before using the heater.
- **Carbon monoxide poisoning:** Early signs of carbon monoxide poisoning resemble the flu, with headaches, dizziness and/or nausea. If you have these signs, the heater may not be working properly. **Get fresh air at once!** Have the heater serviced. Some people are more affected by carbon monoxide than others. These include pregnant women, persons with heart or lung disease or anemia, those under the influence of alcohol, or those at high altitudes.
- Never use this heater in living or sleeping areas.

2. RISK OF BURNS/FIRE/EXPLOSION!

- **NEVER** use any fuel other than 1-K kerosene in this heater. #1 fuel oil is the only acceptable substitute.
- **NEVER** use fuel such as gasoline, benzene, paint thinners or other oil compounds in this heater. **(RISK OF FIRE OR EXPLOSION)**
- **NEVER** use this heater where flammable vapors may be present.
- **NEVER** refill the heaters fuel tank while heater is operating or is still hot.
- This heater is **EXTREMELY HOT** while in operation. Keep all combustible materials away from heater. **Minimum Clearances:** Outlet: 8 feet (250cm) / Sides, top and rear: 4 feet (125cm)
- **NEVER** block air inlet (rear) or air outlet (front) of heater.
- **NEVER** use duct work in front or behind of heater.
- **NEVER** move or handle heater while still hot.
- **NEVER** transport heater with fuel in it's tank.
- When used with an optional thermostat or if equipped with a thermostat heater may start at any time.
- **ALWAYS** locate heater on a stable and level surface.
- **ALWAYS** keep children and animals away from heater.
- Bulk fuel storage should be a minimum of 25 ft. from heaters, torches, portable generators or other sources of ignition. All fuel storage should be in accordance with federal, state or local authorities having jurisdiction.

3. RISK OF ELECTRIC SHOCK!

- Use only the electrical power (voltage and frequency) specified on the model plate of the heater.
- Use only a three-prong, grounded outlet and extension cord.
- **ALWAYS** install the heater so that it is not directly exposed to water spray, rain, dripping water or wind.
- **ALWAYS** unplug the heater when not in use.

CALIFORNIA RESIDENTS: This heater produces carbon monoxide, which is listed by the State of California as a reproductive toxin under Proposition 65.

MASSACHUSETTS RESIDENTS: Massachusetts state law prohibits the use of this heater in any building which is used in whole or in part for human habitation. Use of this heating device in Massachusetts requires local fire dept. permit (M.E.L.C. 148, Section 10A.)

CANADIAN RESIDENTS: Use of this heater shall be in accordance with authorities having jurisdiction and CSA Standard B139.

NEW YORK CITY RESIDENTS: For use only at construction sites in accordance with applicable NYC codes under NYCFD certificate of approval

NEVER LEAVE THE HEATER
UNATTENDED WHILE BURNING!

CONTENTS OF USER'S MANUAL

1. INTRODUCTION

Please read this USER'S MANUAL carefully. It will show you how to assemble, maintain, and operate the heater safely and efficiently to obtain full benefits from its many built-in features.

2. FEATURES

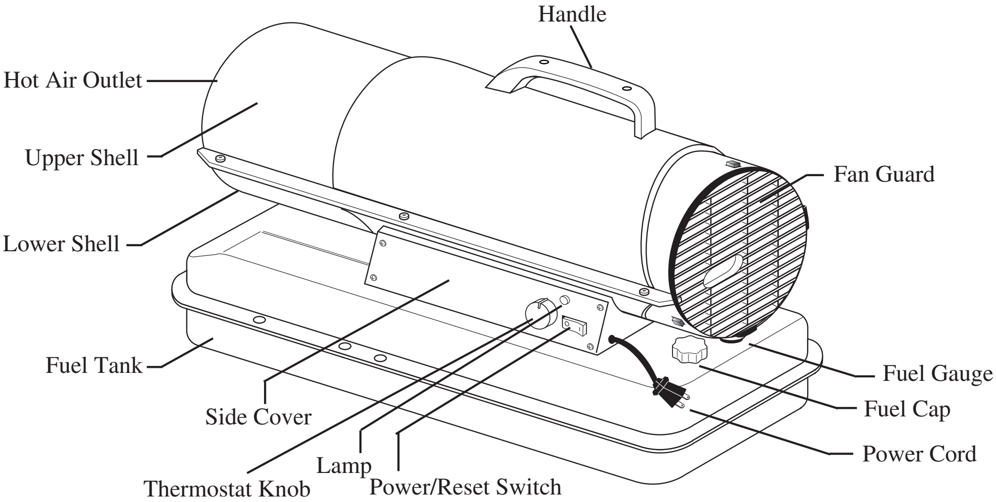


Figure 1. RMC-KFA45T / RMC-KFA65T MODELS

NEVER LEAVE THE HEATER UNATTENDED WHILE BURNING!

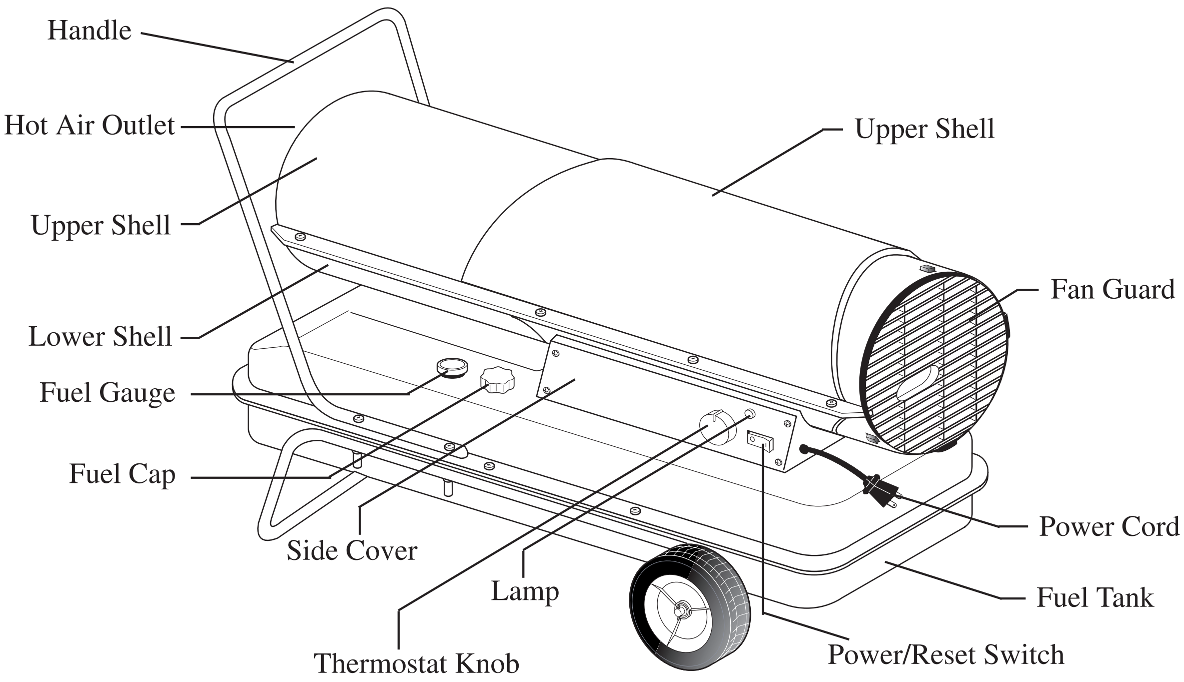


Figure 2. RMC-KFA120T / RMC-KFA170T MODELS

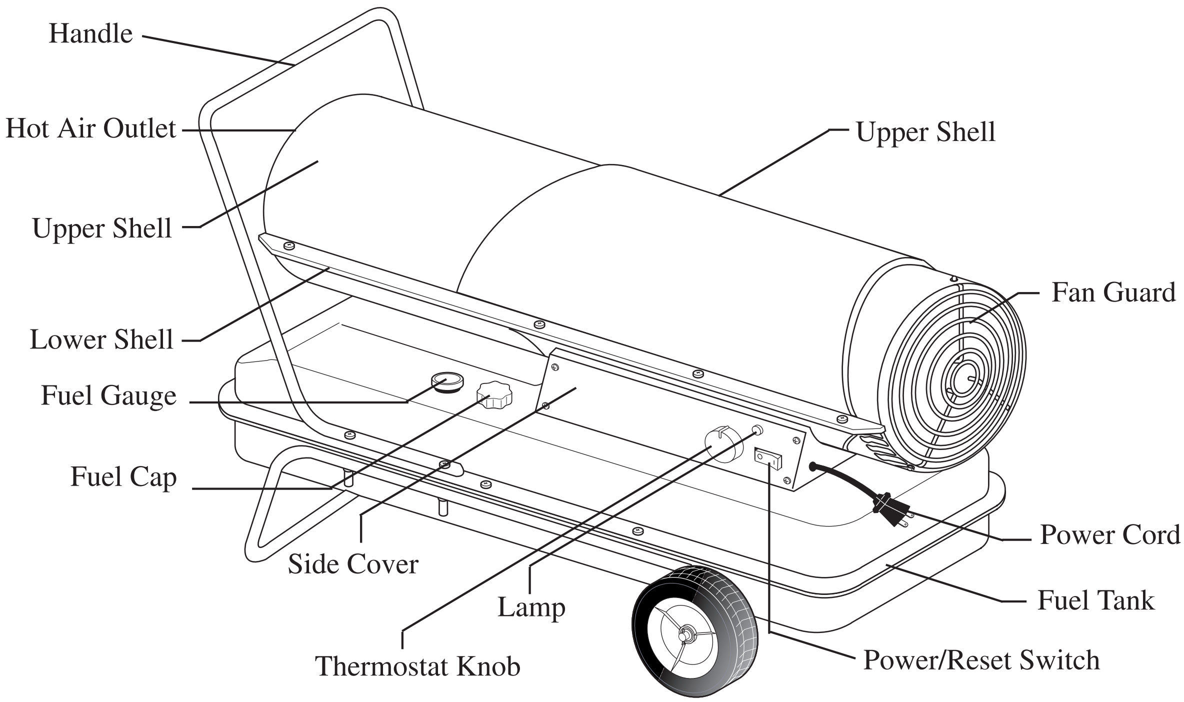


Figure 2. RMC-KFA210T MODEL

NEVER LEAVE THE HEATER UNATTENDED WHILE BURNING!

3. UNPACKING AND ASSEMBLY

1. REMOVE THE HEATER AND ALL PACKING MATERIALS FROM THE BOX. (Fig. 4 and 5)

NOTE: Save the shipping carton and packing materials for future storage.

	RMC-KFA45T/65T	RMC-KFA120T	RMC-KFA170T	RMC-KFA210T
Wheel Support Frame	No	Yes	Yes	Yes
Wheels	No	Yes	Yes	Yes
Handle	Yes	Yes	Yes	Yes
Screws and Nuts	No	Yes	Yes	Yes
Axle	No	Yes	Yes	Yes
Split Pin and Washer	No	Yes	Yes	Yes
Screws	Yes	No	No	No

Figure 4. RMC-KFA45T / RMC-KFA65T MODELS

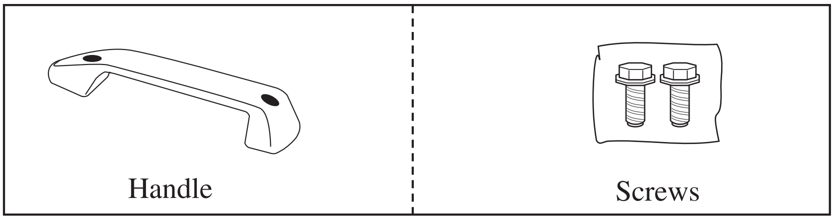
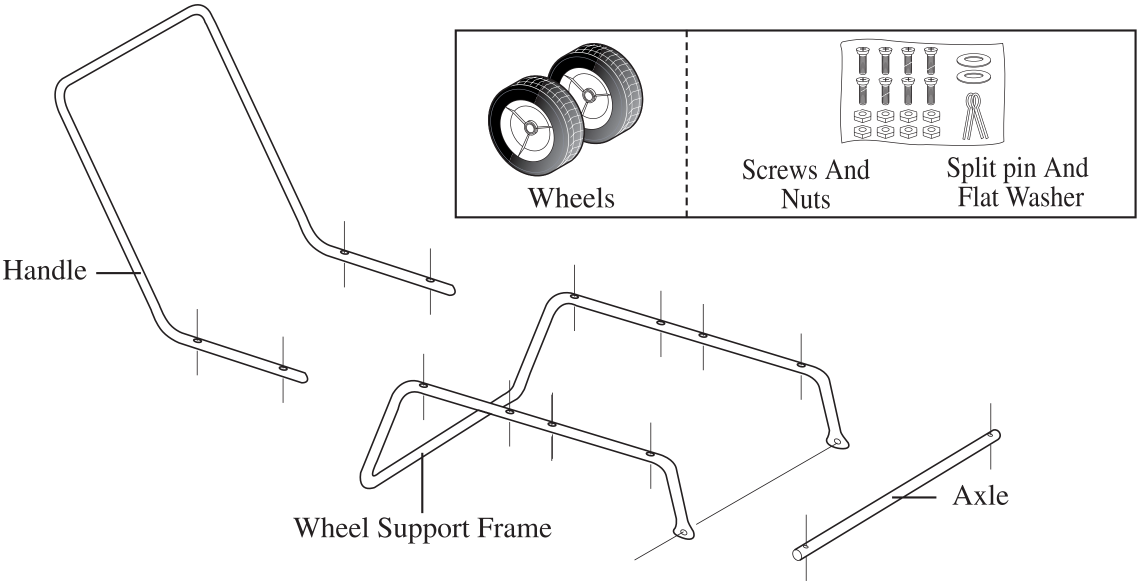


Figure 5. RMC-KFA120T / RMC-KFA170T / RMC-KFA210T MODELS



NEVER LEAVE THE HEATER UNATTENDED WHILE BURNING!

2. ASSEMBLY

A. For RMC-KFA45T/RMC-KFA65T Models only (Figure 6)

Tools Required

• Medium Phillips Screwdriver

1. Align the holes on the upper shell with the 2 mounting holes on the handle as shown in Figure 6.

2. Secure each hole with a screw.

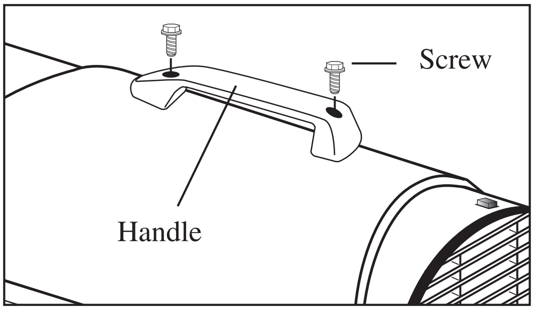


Figure 6

B. For RMC-KFA120T / RMC-KFA170T / RMC-KFA210T Models only (Figure 7)
These models are furnished with wheels and handles. Wheels, handles, and the mounting hardware are found in the shipping carton.

Tools Required

• Medium Phillips Screwdriver
• 5/16"(M5) open or Adjustable Wrench. Use US(INCH) Screws Nuts
• Long Nose Pliers

1. Slide axle through wheel support frame. Install wheels on axle.
NOTE: When installing wheels, point extended hub of wheels toward wheel support frame (see Figure 7)

2. Place Flat washers and split pin on axle ends and bend split pins with long nose pliers to secure.

3. Place heater on wheel support frame. Make sure air inlet end (rear) of heater is over wheels. Align the holes on fuel tank flange with holes on wheel support frame.

4. Position the handle on top of fuel tank flange. Insert screws through handles, fuel tank flange, and wheel support frames as shown in Figure 7 and attach nut finger tight after each screw is inserted.
5. After all screws are inserted, tighten nuts firmly.

CAUTION: DO NOT OPERATE heater without support frame assembled to tank.

NEVER LEAVE THE HEATER UNATTENDED WHILE BURNING!

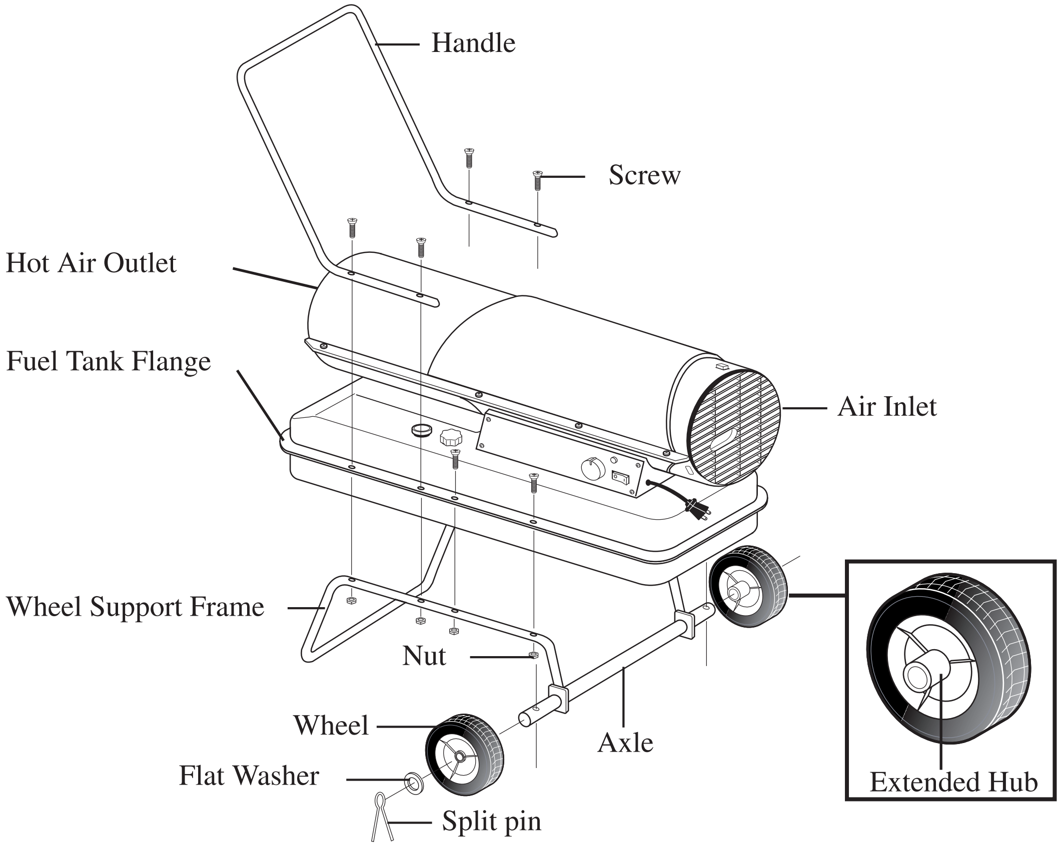


Figure 7. Wheel and Handle Assembly, RMC-KFA120T/RMC-KFA170T/RMC-KFA210T MODELS ONLY

NOTE: Heater should be inspected before each use, and at least annually by a qualitied service person.

4. KEROSENE (1-K)

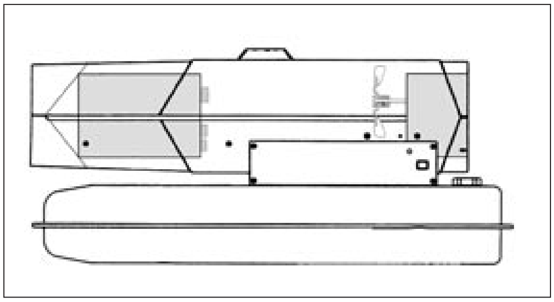
It is **EXTREMELY IMPORTANT** for the proper operation of this heater that you use the correct grade of kerosene. The correct grade of kerosene is identified as 1-K kerosene.
1-K Kerosene has been refined to virtually eliminate contaminants such as sulphur, which can cause a rotten egg odor during operation of the heater. #1 fuel oil may be used if 1-K kerosene is not available.

KEROSENE SHOULD ONLY BE STORED IN A BLUE CONTAINER THAT IS CLEARLY MARKED "KEROSENE". NEVER STORE KEROSENE IN A RED CONTAINER.
Red containers are associated with gasoline.

NEVER store kerosene in the living space. Kerosene should be stored in a well ventilated place outside the living area.
NEVER use any fuel other than 1-K kerosene (#1 fuel oil is an acceptable substitute.)
NEVER use fuel such as gasoline, benzene, alcohol, white gas, camp stove fuel, paint thinners, or other oil compounds in this heater. These are volatile fuels that can cause an explosion or uncontrolled flames.
NEVER store kerosene in direct sunlight or near a source of heat.
NEVER use kerosene that has been stored from one season to the next. Kerosene deteriorates over time. **"OLD KEROSENE" WILL NOT BURN PROPERLY IN THIS HEATER.**

NEVER LEAVE THE HEATER UNATTENDED WHILE BURNING!

5. OVERVIEW OF HEATERS DESIGN



Fuel System: This heater is equipped with an electric air pump that forces air through the air line connected to the fuel intake and then through a nozzle in the burner head. When the air passes in front of the fuel intake it causes fuel to rise from the tank and into the burner nozzle. This fuel and air mixture is then sprayed into the combustion chamber in a fine mist.

"Sure Fire Ignition": The electronic ignitor sends voltage to a specially designed spark plug. The spark plug ignites the fuel and air mixture described above.

The Air System: The heavy duty motor turns a fan that forces air into and around the combustion chamber. Here the air is heated and then forced out the front of the heater.

The Safety System:

A. Temperature Limit Control: This heater is equipped with a Temperature Limit Control designed to turn off the heater should the internal temperature rise to an unsafe level. If this device activates and turns your heater off it may require service.

MODELS	Internal Shut-Off Temp. Plus/Minus 10 Degrees	Reset Temperature Plus/Minus 10 Degrees
RMC-KFA120T/RMC-KFA170T	230˚F/110˚C	194˚F/90˚C
RMC-KFA45T/RMC-KFA65T	176˚F/80˚C	122˚F/50˚C
RMC-KFA210T	194˚F/90˚C	140˚F/60˚C

Once the temperature falls below the reset temperature you will be able to start your heater.

B. Electrical System Protection: This heaters electrical system is protected by a circuit breaker mounted to the power switch that protects the PCB assembly and other electrical components from damage. If your heater fails to operate check this fuse first and replace as needed.

FUSE TYPE:	All Models	125 volt/8 amps

C. Flame-Out Sensor: Utilizes a photocell to monitor the flame in burn chamber during normal operation. It will cause the heater to shut-off should the burner flame extinguish.

NEVER LEAVE THE HEATER
UNATTENDED WHILE BURNING!

6. FUELING YOUR HEATER

NEVER FILL THE HEATER FUEL TANK IN THE LIVING SPACE: FILL THE TANK OUTDOORS.
DO NOT OVERFILL YOUR HEATER AND BE SURE HEATER IS LEVELED.
IMPORTANT NOTICE REGARDING FIRST IGNITION OF HEATER:
The first time you light the heater, it should be done outdoors. This allows the oils, etc. used in manufacturing the heater to burn off outside.
WARNING!!: NEVER REFILL HEATER FUEL TANK WHEN HEATER IS OPERATING OR STILL HOT.

7. OPERATION

A.) VENTILATION

RISK OF INDOOR AIR POLLUTION/USE HEATER ONLY IN WELL VENTILATED AREAS.
Provide a fresh air opening of at least three square feet (2,800 sq. cm) for each 100,000 BTU/Hr. rating. Provide extra fresh air if more heaters are being used.

Example: A RMC-KFA210T heater requires one of the following:
- a two-car garage door raised six inches (15.24 cm)
- a single-car garage door raised nine inches (22.86 cm)
- two, thirty-inch (76.20 cm) windows raised fifteen inches (38.1 cm)

B.) OPERATION

TO START HEATER

1. Fill fuel tank with kerosene or No. 1 fuel oil.
2. Attach fuel cap.
3. Plug power cord of heater into three-prong, grounded extension cord. Extension cord must be at least six feet long.

   Extension Cord Wire Size Requirements
   - 6 to 10 feet (1.8 to 3 meters) long, use 18 AWG conductor.
   - 11 to 100 feet (3.4 to 30.5 meters) long, use 16 AWG conductor.
   - 101 to 200 feet (30.8 to 61 meters) long, use 14 AWG conductor.
4. Turn “THERMOSTAT CONTROL Knob” to desired setting and push power switch to ON” position, power indicator lamp will light and heater will start. If heater does not start, the thermostat setting may be too low, turn THERMOSTAT CONTROL Knob” to higher position to start heater. If heater still does not start, turn power switch to “OFF” and then to “ON” position. (See Figure9). If heater still does not start, see Troubleshooting Guide on page 13.

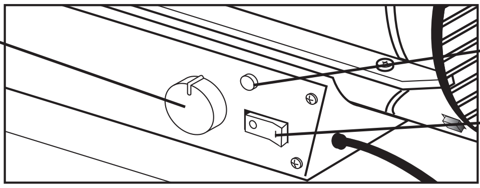


Figure 9. RMC-KFA45T/65T/120T/170T/210T MODELS

NOTICE: The major electrical components of this heater are protected by a safety fuse mounted to the PCB board. If your heater fails to start, check this fuse first and replace as necessary. You should also check your power source to insure that proper voltage and frequency are being supplied to the heater.

NEVER LEAVE THE HEATER UNATTENDED WHILE BURNING!

<u>TO STOP HEATER</u>
1. Turn switch to "OFF" and unplug power cord.

<u>TO RESTART HEATER</u>
1.Wait 10 seconds after stopping heater.
2. Repeat steps under <u>to start heater</u>.

<u>8. LONG TERM STORAGE OF YOUR HEATER</u>

1. Drain fuel tank through fuel cap opening.
2. Using a small amount of kerosene, swirl and rinse the inside of the tank.
   <u>NEVER</u> <u>mix water with the kerosene</u> as it will cause rust inside the tank. Pour the kerosene out making sure that you remove it all.

IMPORTANT: Do not store kerosene over summer months for use during next heating season. Using old fuel could damage heater.

- Reinstall fuel cap. Properly dispose of old and dirty fuel.
- Store heater in dry well ventilated area. Make sure storage place is free of dust and corrosive fumes.
- Store the heater in the original box with the original packing material and keep the <u>USER'S MANUAL</u> with the heater.

<u>9. MAINTENANCE</u>

<u>WARNING!!: NEVER SERVICE HEATER WHILE IT IS PLUGGED IN OR WHILE HOT!</u>

USE ORIGINAL EQUIPMENT REPLACEMENT PARTS. Use of third party or other alternate components will void warranty and may cause unsafe operating conditions.

A.) FUEL TANK

FLUSH EVERY 200 HOURS OF OPERATION OR AS NEEDED (SEE STORAGE ABOVE)

B.) AIR INTAKE FILTER

WASH AND DRY WITH SOAP AND WATER EVERY 500 HOURS OF OPERATION OR AS NEEDED.

- Remove screws along each side of heater using medium phillips screwdriver
- Lift upper shell off.
- Remove fan guard.
- Wash or replace air intake filter.
- Reinstall fan guard and upper shell.

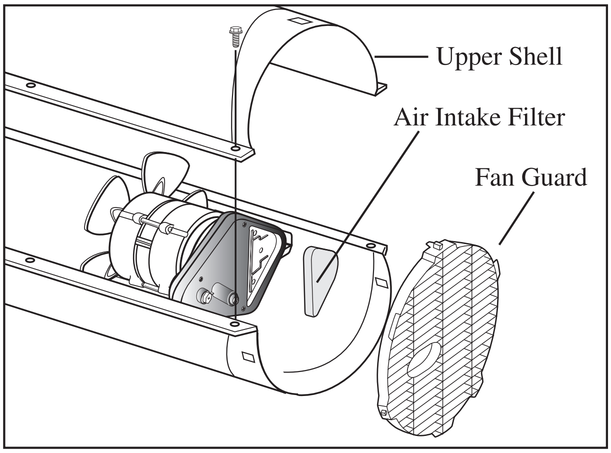


Figure 10

NEVER LEAVE THE HEATER UNATTENDED WHILE BURNING!

C.) AIR OUTPUT FILTER, LINT FILTER

REPLACE EVERY 500 HOURS OF OPERATION OR ONCE A YEAR.

- Remove upper shell and fan guard (See page 9).
- Remove end filter cover screws using medium phillips screwdriver.
- Remove end filter cover.
- Replace air output and lint filter.
- Reinstall end filter cover.
- Reinstall fan guard and upper shell.

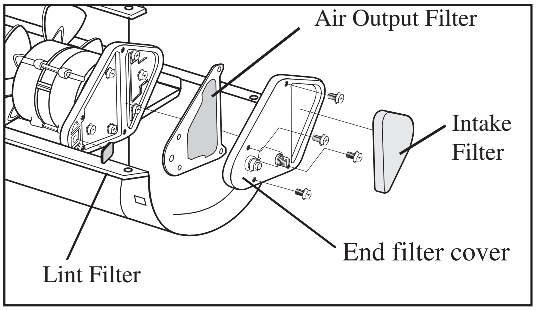


Figure 11.

D.) FAN BLADES

CLEAN EVERY SEASON OR AS NEEDED.

- Remove upper shell (See page 9).
- Use M6 allen wrench to loosen set screw which holds fan blade to motor shaft.
- Slip fan blade off motor shaft.
- Clean fan blade using a soft cloth moistened with kerosene or solvent.
- Dry fan blade thoroughly.
- Reinstall fan blade on motor shaft. Place fan blade hub flush with end of motor shaft.
- Place set screw on flat of shaft. Tighten set screw firmly (40-50 inch-pounds/4.5-5.6 N-m).
- Reinstall upper shell.

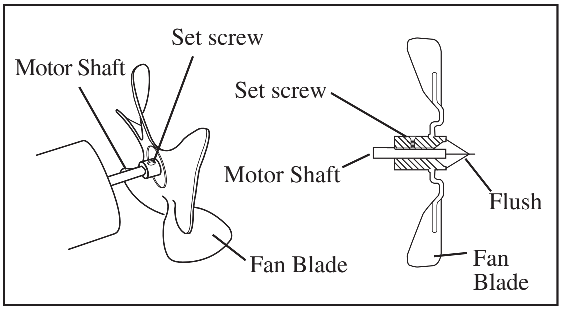


Figure 12.

E.) NOZZLE

REMOVE DIRT IN NOZZLE AS NEEDED (SEE PAGE 16).
(For RMC-KFA45T/65T/120T/170T Models Only)

- Remove upper shell (See page 9).
- Remove fan blade (See Section D above).
- Remove fuel and air line hoses from burner head.
- Remove ignitor wire from spark plug.
- Remove three screws using medium phillips screwdriver and remove burner head from combustion chamber.
- Remove spark plug from burner head using medium phillips screwdriver.
- Carefully remove nozzle from burner head using 5/8” socket wrench.
- Blow compressed air through face of nozzle. (this will remove any dirty in nozzle)
- Reinstall nozzle into burner head and tighten firmly. (80~110 inch-pounds)
- Reinstall spark plug in burner head.
- Attach burner head to combustion chamber.
- Attach ignitor wire to spark plug.
- Attach fuel and air line hoses to burner head.
- Reinstall fan blade and upper shell.

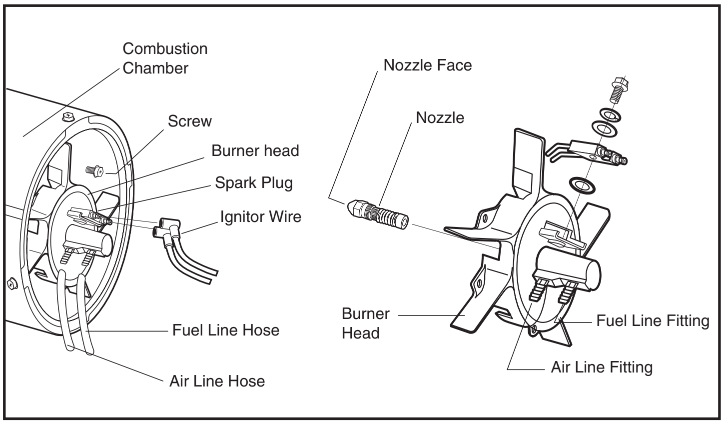


Figure 13.

NEVER LEAVE THE HEATER UNATTENDED WHILE BURNING!

(For RMC-KFA 210T Model Only)
- Remove upper shell (See page 9).
- Remove fan (See page 10).
- Remove fuel and air line hoses from adaptor-nozzle.
- Remove ignitor wire from spark plug.
- Remove photocell from photocell bracket.
- Remove combustion chamber.
- Remove four screws using medium phillips screwdriver and remove bracket-burner from combustion chamber.
- Remove spark plug from burner head using medium phillips screwdriver.
- Carefully remove nozzle from adaptor-nozzle using 5/8” socket wrench.
- Blow compressed air through face of nozzle. (this will remove any dirt in nozzle)
- Reinstall nozzle into adaptor-nozzle and tighten firmly. (80~110 inch-pounds)
- Reinstall spark plug in bracket-spark.
- Attach Bracket-Burner to combustion cahmber.
- Replace combustion chamber.
- Attach ignitor wire to spark plug.
- Attach fuel and air line hoses from adaptor-nozzle.
- Attach photocell to photocell bracket.
- Reinstall fan blade and upper shell.

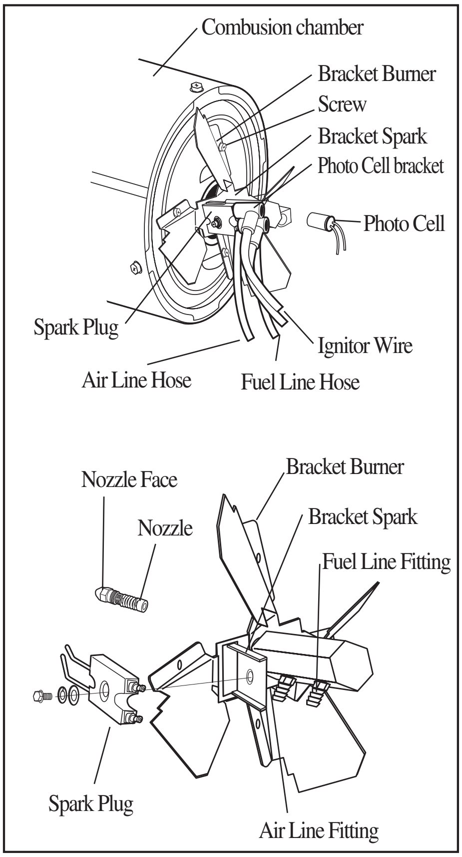


Figure 14.

F.) SPARK PLUG

CLEAN AND REGAP EVERY 600 HOURS OPERATION OR REPLACE AS NEEDED.

(For RMC-KFA 45T/65T/120T/170T Models Only)
- Remove upper shell (See page 9).
- Remove fan (See page 10).
- Remove ignitor wire from spark plug.
- Remove spark plug from burner head using medium phillips screwdriver.
- Clean and regap spark plug electrodes to 3.5mm gap.
- Reinstall spark plug in burner head.
- Attach ignitor wire to spark plug.
- Reinstall fan and upper shell.

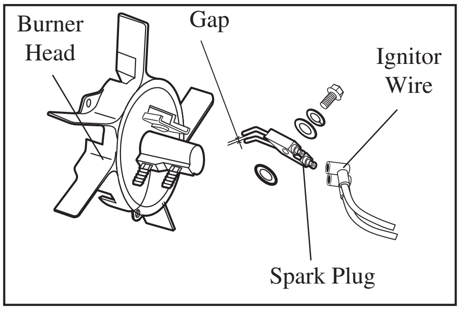


Figure 15.

NEVER LEAVE THE HEATER
UNATTENDED WHILE BURNING!

(For RMC-KFA 210T Models Only)
- Remove upper shell (See page 9).
- Remove fan (See page 10).
- Remove ignitor wire from spark plug.
- Remove spark plug from bracket-spark using medium phillips screwdriver.
- Clean and regap spark plug electrodes to 3.5mm gap.(0.138″)
- ReInstall spark plug in bracket-spark.
- Attach ignitor wire to spark plug.
- Reinstall fan and upper shell.

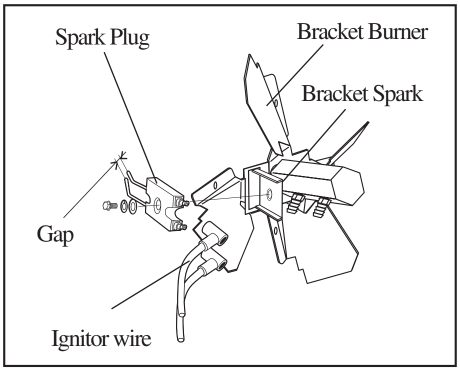


Figure 16.

G.) PHOTOCELL

CLEAN PHOTOCELL ANNUALLY OR AS NEEDED.

(For RMC-KFA 45T/65T/120T/170T Models Only)
- Remove upper shell (See page 9).
- Remove fan (See page 10).
- Remove photocell from it's mounting. Clean photocell lens with cotton swab. TO REPLACE: Remove side cover near on/off switch.
- Disconnect wires from circuit board and remove photocell.
- Install new photocell and attach wires to circuit board.
- Replace fan and upper shell.

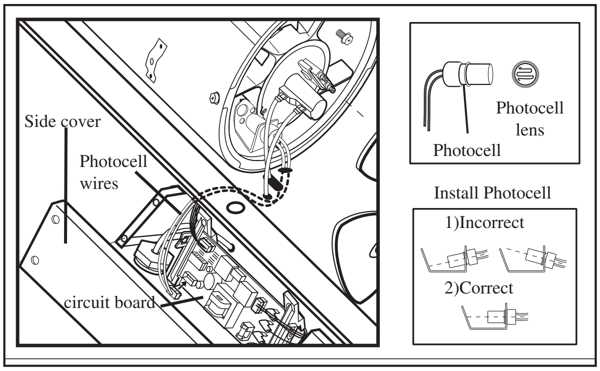


Figure 17.

(For RMC-KFA 210T Model Only)
- Remove upper shell (See page 9).
- Remove fan (See page 10).
- Remove photocell from it's mounting. Clean photocell lens with cotton swab. TO REPLACE : Remove side cover opposite on/off switch.
- Disconnect wires from circuit board and remove photocell.
- Install new photocell and attach wires to circuit board.
- Replace fan and upper shell.

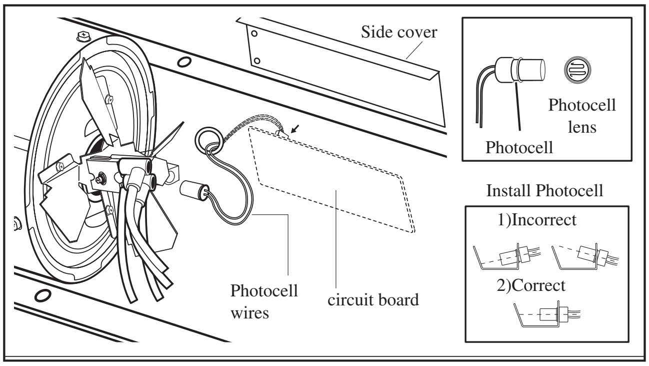


Figure 18.

NEVER LEAVE THE HEATER
UNATTENDED WHILE BURNING!

H.) FUEL FILTER

CLEAN OR REPLACE TWICE A HEATING SEASON OR AS NEEDED.

(For RMC-KFA 45T/65T/120T/170T Models Only)

- Remove side cover screws using medium phillips screwdriver.
- Remove side cover.
- Pull fuel line off fuel filter neck.
- Turn fuel filter 90° to counter clockwise and pull to remove(RMC-KFA45T/65T Models).
- Turn fuel filter 90° to clockwise and pull to remove(RMC-KFA120T/170T Models).
- Wash fuel filter with clean fuel and replace in tank.
- Attach fuel line to fuel filter neck.
- Reinstall side cover.

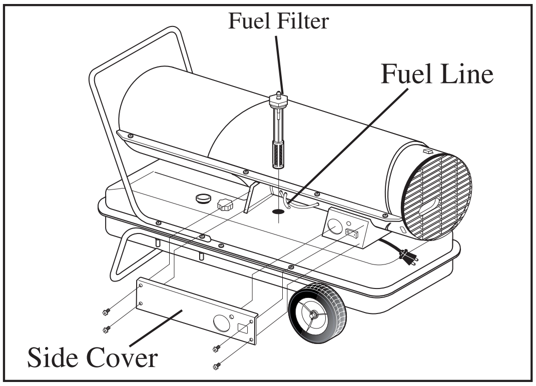


Figure19.

(For RMC-KFA 210T Model Only)

- Remove side cover screws using medium phillips screwdriver.
- Remove side cover.
- Pull fuel line (attached valve elbow) off fuel filter neck.
- Fuel filter 90° turn to clockwise and pull to remove.
- Wash fuel filter with clean fuel and replace in tank.
- Attach fuel line to fuel filter neck.
- Reinstall side cover.

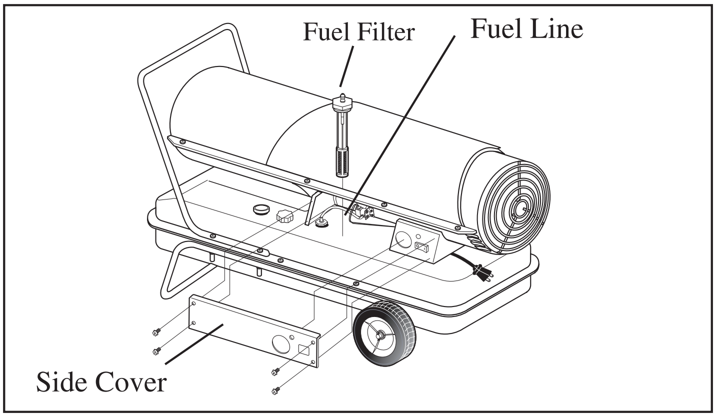


Figure 20.

NEVER LEAVE THE HEATER
UNATTENDED WHILE BURNING!

I) FUEL VALVE

(For RMC-KFA210T Model only)

- Remove side cover screws using medium phillips screwdriver (See page 13).
- Remove upper shell (See page 9).
- Remove fan (See page 10).
- Pull fuel line (lower and upper) off the fuel valve fittings (See figure 21).
- Disconnet red and orange wires from valve connector (See figure 21).
- Remove 2 screws holding fuel valve and bracket to lower shell Using medium phillips screw driver (See figure 21).
- Remove 2 screws holding fuel valve to Bracket using medium phillps screw driver.(See figure 21).
- Attach new fuel valve to bracket with 2 screws.
- Install new fuel valve and bracket on lower shell with 2 screws.
- Connect red and orange wires (polarity not important) to valve connector (See figue 21).
- Connect upper and lower fuel lines to fuel valve (See figure 21).
- Replace fan, upper shell, side cover.

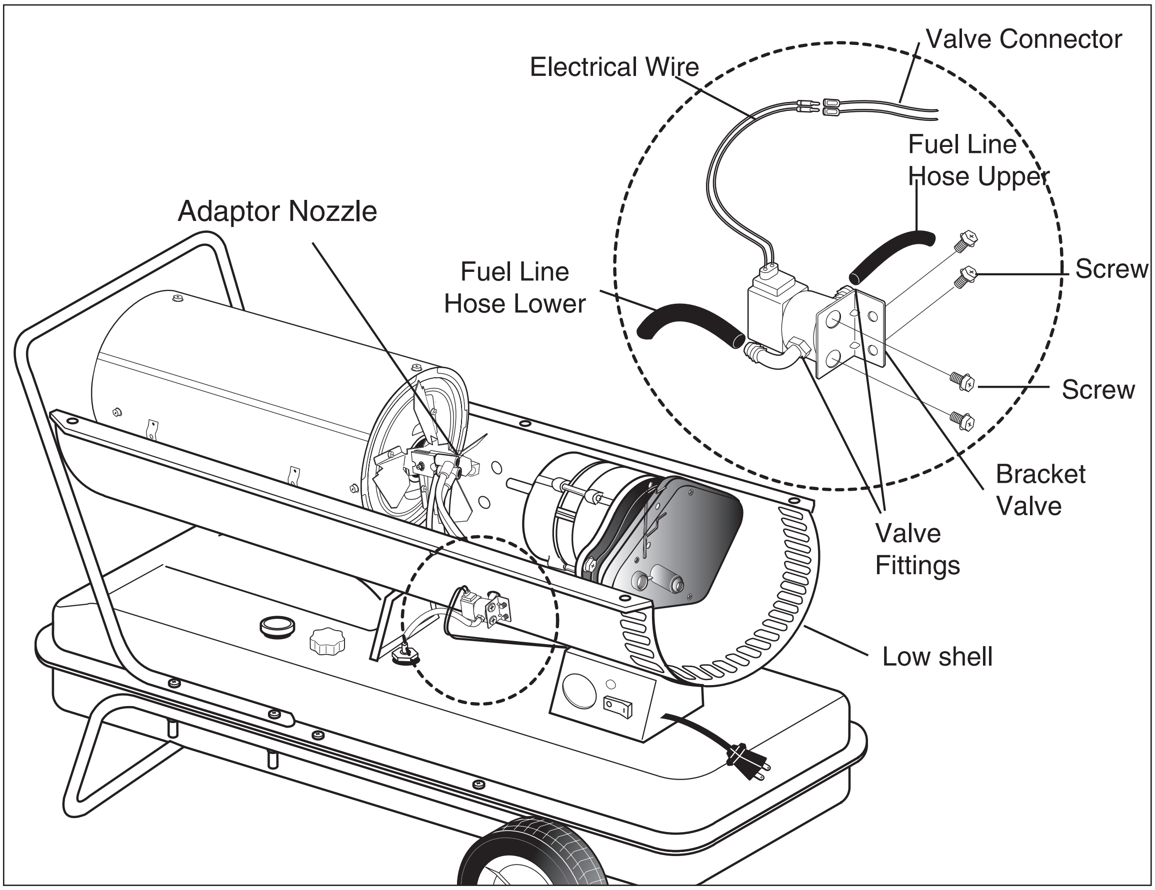
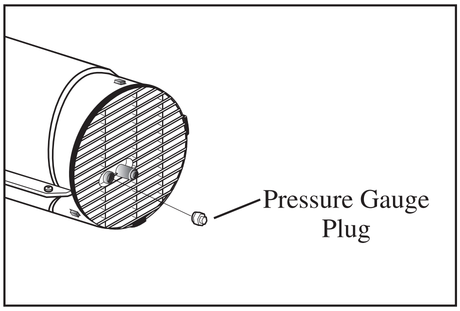


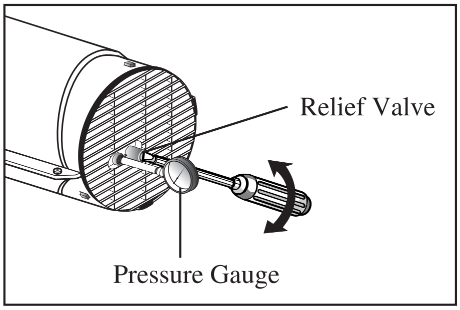
Figure 21.

NEVER LEAVE THE HEATER
UNATTENDED WHILE BURNING!

I.) PUMP PRESSURE ADJUSTMENT

- Remove pressure gauge plug from end filter cover.
- Install accessory pressure gauge.
- Start heater (See Operation, page 8)
  Allow motor to reach full speed
- Adjust pressure (Using a flat blade screwdriver)
  Turn relief valve to right to increase pressure. Turn relief valve to left to decrease pressure. Set pump pressure below correct for pressure for each model.
- Stop heater (See Operation, page 9)
- Remove pressure gauge. Replace pressure gauge plug in end filter cover.





MODEL	PUMP PRESSURE
RMC-KFA45T	2.8 psi
RMC-KFA65T	3.5 psi
RMC-KFA120T	4.5 psi
RMC-KFA170T	6.5 psi
RMC-KFA210T	8.5 psi

NOTE: USE ONLY ORIGINAL EQUIPMENT REPLACEMENT PARTS.
Use of alternate or third party components will void any warranty and may cause unsafe operation condition.

NEVER LEAVE THE HEATER UNATTENDED WHILE BURNING!

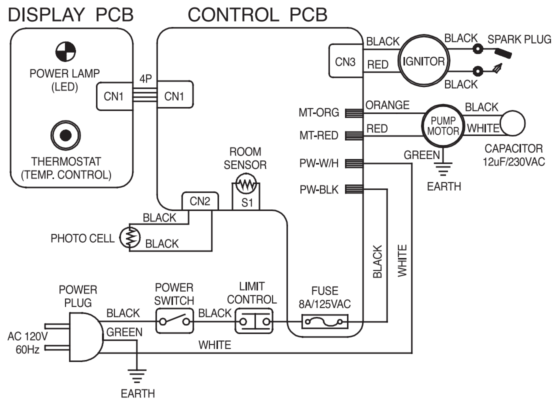
10. TROUBLE SHOOTING GUIDE

TROUBLE	POSSIBLE CAUSE	CORRECTIVE ACTION
Heater ignites but MAIN PCB assembly shuts heater off after a short period of time. (Lamp is flickering)	1. Wrong pump pressure 2. Dirty Air Output, Air Intake and Lint Filter 3. Dirty Fuel Filter 4. Dirt in Nozzle 5. Dirty Photocell Lens 6. Photocell Assembly not properly installed. (Not seeing the flame) 7. Bad electrical connection between photocell and MAIN PCB assembly 8. Defective photocell 9. Defective fuel valve.	1. See Pump Pressure Adjustment, page 15. 2. See Air Output, Air intake and Lint Filters, page 9. 3. See Fuel Filter, page 13. 4. See Nozzle, page 10. 5. Clean Photocell Lens, page 12. 6. Make sure photocell boot is properly seated in bracket, page 12. 7. Check electrical components See wiring diagram, page 17. 8. Replace photocell, page 12. 9. See fuel valve, page 14 .
Heater will not ignite but motor runs for a short period of time. (Lamp is flickering)	1. No fuel in tank 2. Wrong pump pressure 3. Carbon deposits on spark plug and/or improper gap 4. Dirty fuel filter 5. Dirt in nozzle 6. Water in fuel tank 7. Bad electrical connection between ignitor and MAIN PCB assembly 8. Ignitor wire is not attached to spark plug 9. Defective ignitor 10. Defective fuel valve.	1. Fill tank with kerosene 2. See Pump Pressure Adjustment, page 15. 3. See Spark Plug, page 11. 4. See Fuel Filter, page 13. 5. See Nozzle, page 10. 6. Flush fuel tank with clean kerosene, page 9. 7. Check electrical connections, See wiring diagram, page 17. 8. Attach ignitor wire to spark plug. See Spark Plug, page 11. 9. Replace ignitor. 10. See fuel valve, page 14.
Fan does not turn when heater is plugged in and power switch was in the "ON" position (Lamp is on or flickering)	1. Thermostat setting is too low 2. Bad electrical connection between motor and MAIN PCB assembly	1. Turn thermostat control knob to a higher setting 2. Check electrical connections, See Wiring Diagram, page 17.
Heater will not turn-on (Lamp is off)	1. Temperature limit safety device is overheated 2. No electrical power 3. Blown fuse 4. Bad electrical connection between temperature limit safety device and PCB board	1. Turn power switch to "OFF" and allow to cool (about 10 min.). Then turn power switch to "ON" position. 2. Check to insure heater cord and extension cord are plugged in. Check power supply. 3. Replace safety fuse in PCB board. 4. Check electrical connections. See Wiring Diagram, page 17.

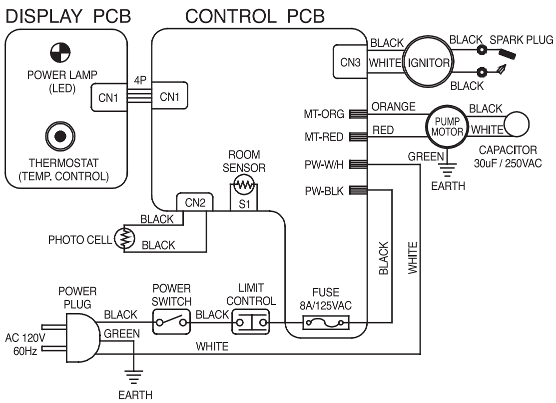
NEVER LEAVE THE HEATER
UNATTENDED WHILE BURNING!

11. WIRING DIAGRAM

A) WIRING DIAGRAM (RMC-KFA45T / RMC-KFA65T)



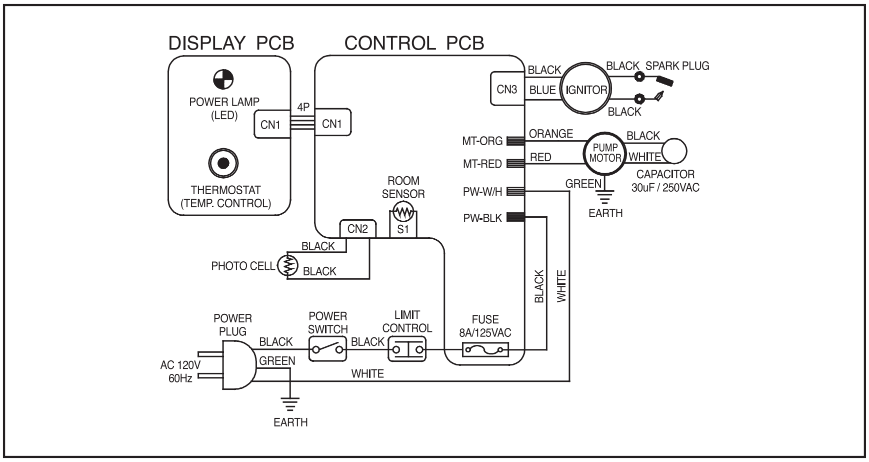
B) WIRING DIAGRAM (RMC-KFA120T)



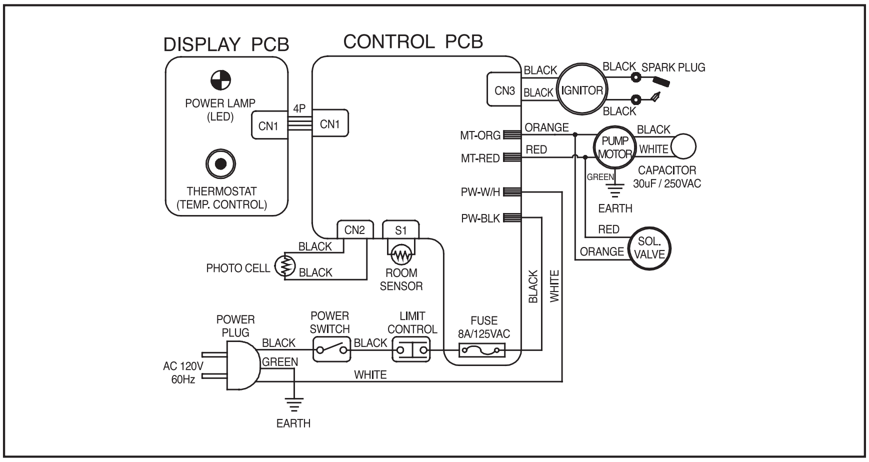
NEVER LEAVE THE HEATER
UNATTENDED WHILE BURNING!

11. WIRING DIAGRAM

C) WIRING DIAGRAM (RMC-KFA170T)

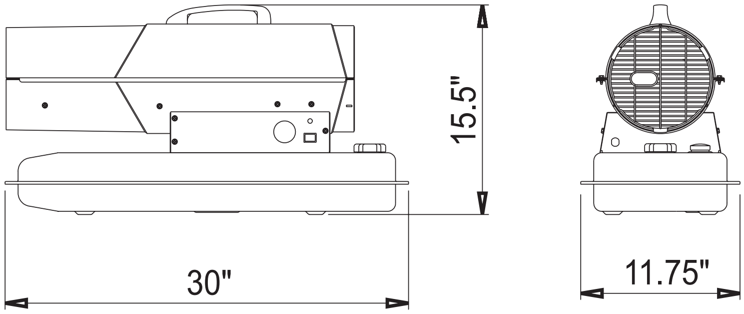


D) WIRING DIAGRAM (RMC-KFA210T)

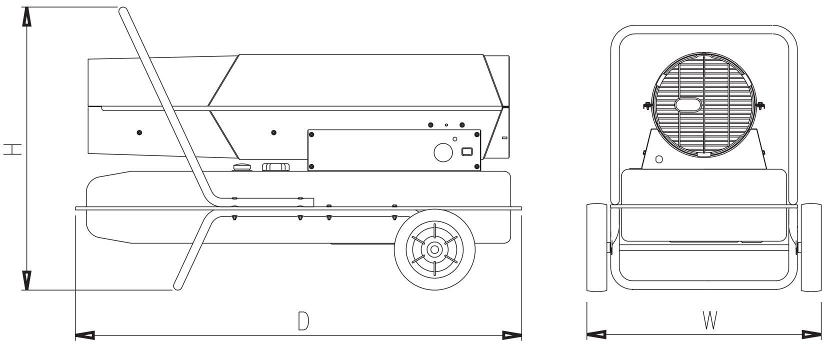


NEVER LEAVE THE HEATER
UNATTENDED WHILE BURNING!

12. SPECIFICATIONS



RMC-KFA45T / RMC-KFA65T



	KFA120T	KFA170T KFA210T
H	23"	24.75"
D	33.5"	39"
W	19"	20.5"

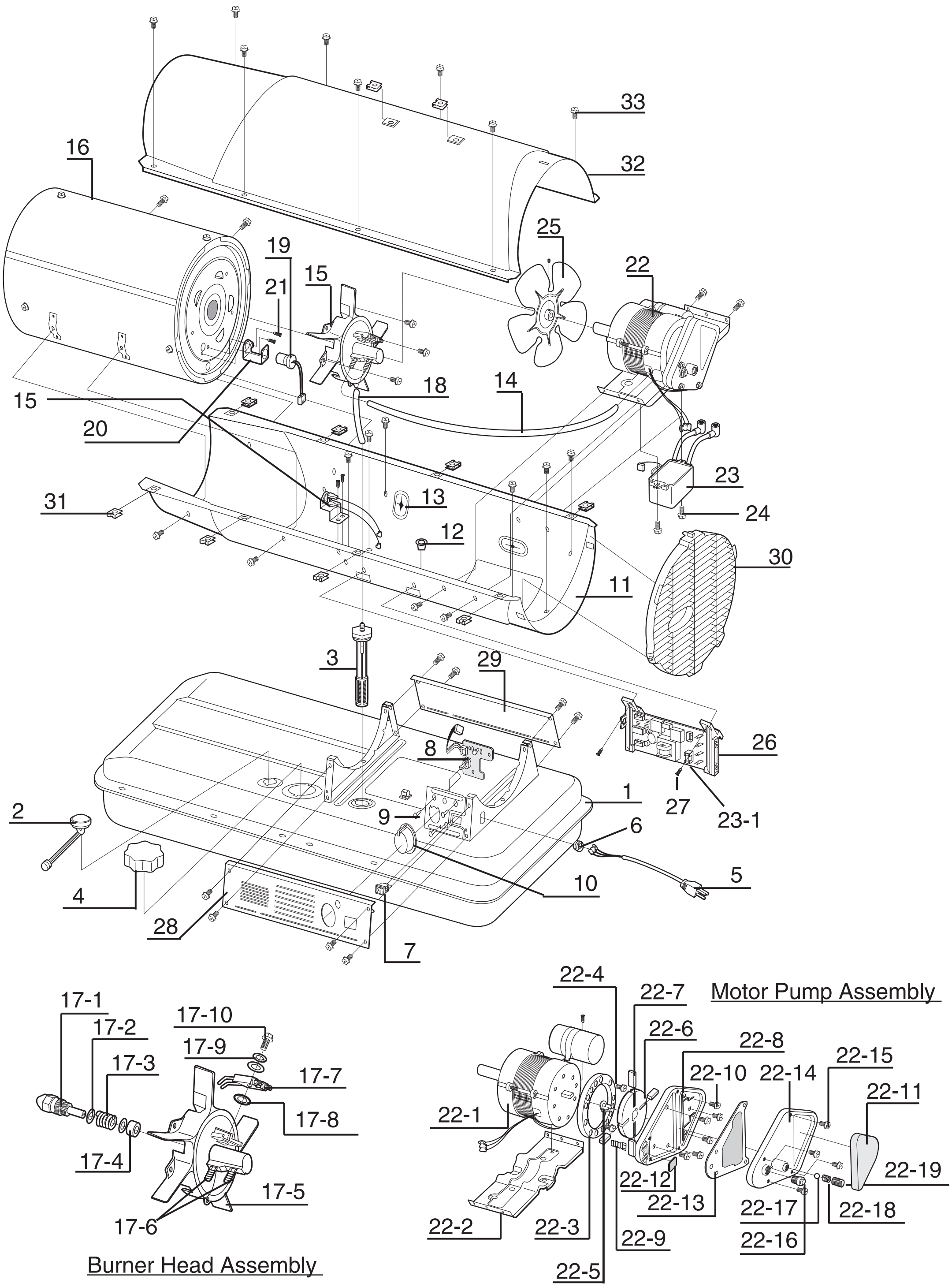
RMC-KFA120T / RMC-KFA170T / RMC-KFA210T

MODEL	**RMC-KFA45T**	**RMC-KFA65T**	**RMC-KFA120T**	**RMC-KFA170T**	**RMC-KFA210T**
BTU/Hr.	45,000	65,000	120,000	170,000	210,000
Fuel Consumption - Gal./Hr.	0.35	0.5	0.9	1.3	1.6
Fuel Tank Capacity - Gal.	5.0	5.0	10.0	13.0	13.0
Pump Pressure PSI	2.8	3.5	4.5	6.5	8.5
Volt/Hz	120Vac/60Hz	120Vac/60Hz	120Vac/60Hz	120Vac/60Hz	120Vac/60Hz
Amps.	1.6	1.6	2.5	3.2	3.7
Phase	1	1	1	1	1
Size(W × D × H)	11.75" × 30" ×15.5"	11.75" × 30" × 15.5"	19" × 33.5" ×23"	20.5" × 39" ×24.75	20.5" × 39" ×24.75"
Weight Lbs.	31.5	32	55	61.75	68

NEVER LEAVE THE HEATER
UNATTENDED WHILE BURNING!

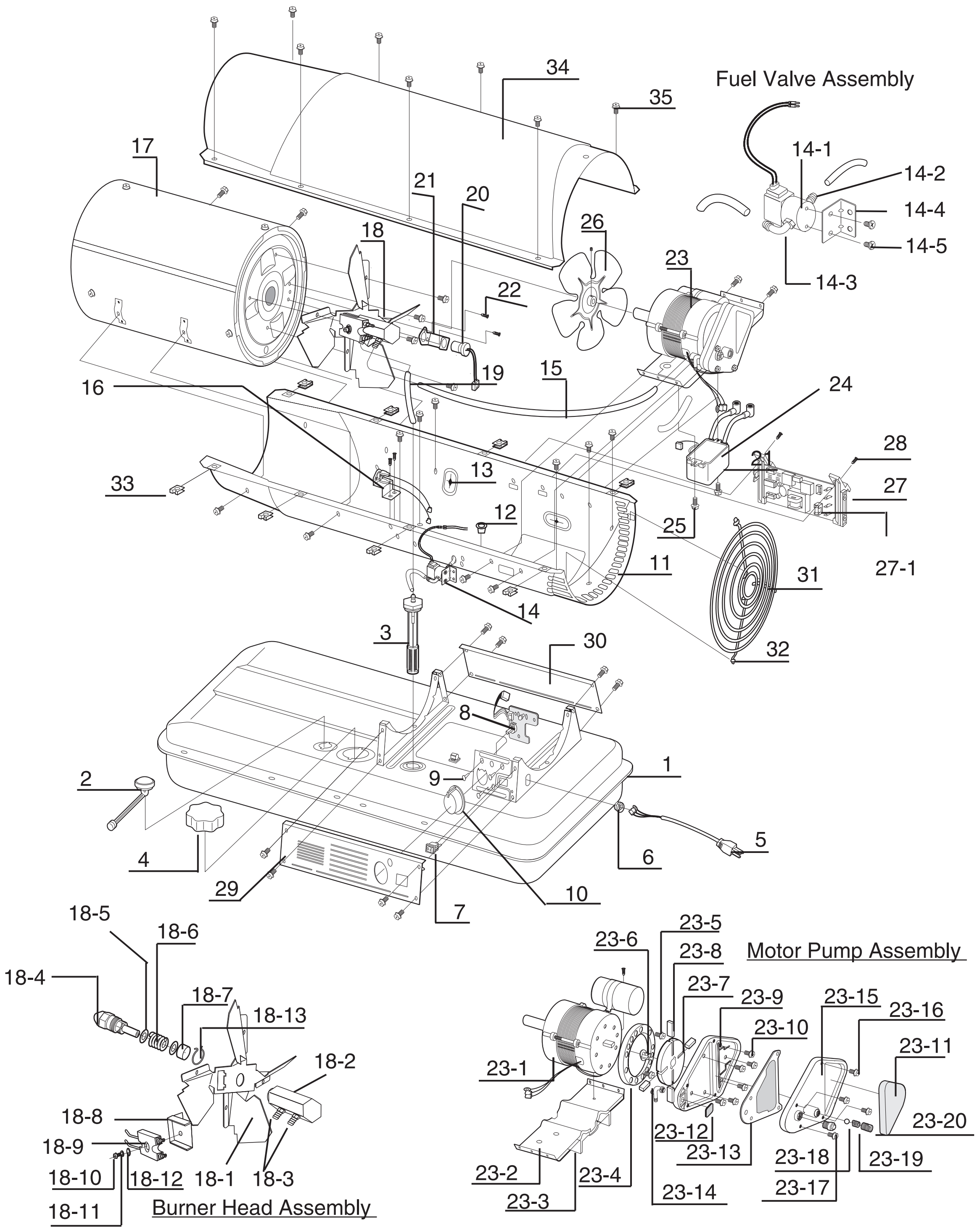
13. EXPLODED PARTS DRAWING (RMC-KFA45T/65T/120T/170T Models Only)

NOTE: SPECIFY MODEL NUMBER AND PART NUMBER WHEN ORDERING PARTS.



NEVER LEAVE THE HEATER
UNATTENDED WHILE BURNING!

13. EXPLODED PARTS DRAWING (RMC-KFA 210T Model Only)



NEVER LEAVE THE HEATER UNATTENDED WHILE BURNING!

14. PARTS LIST (RMC-KFA 45T/65T/120T/170T Models Only)

KEY NO.	DESCRIPTION	PART NO.			
		RMC-KFA45T	RMC-KFA65T	RMC-KFA120T	RMC-KFA170T
1	Fuel Tank Assembly	2151-0005-00	2151-0005-00	2151-0002-00	2151-0001-00
2	Fuel Gauge	2156-0005-00	2156-0005-00	2156-0001-00	2156-0001-00
3	Fuel Filter Assembly	2155-0005-00	2155-0005-00	2155-0001-00	2155-0001-00
4	Fuel Cap	2151-0003-00	2151-0003-00	2151-0003-00	2151-0003-00
5	Power Cord	3980-0031-00	3980-0031-00	3980-0031-00	3980-0031-00
6	Cord Bushing	3712-0011-00	3712-0011-00	3712-0011-00	3712-0011-00
7	Power Switch	39A0-0044-00	39A0-0044-00	39A0-0044-00	39A0-0044-00
8	Display P.C.B Assembly	215A-0005-00	215A-0005-00	215A-0005-00	215A-0005-00
9	Button Support	3713-0045-00	3713-0045-00	3713-0045-00	3713-0045-00
10	Thermostat Control Knob	3231-0072-00	3231-0072-00	3231-0072-00	3231-0072-00
11	Lower - Shell	3111-0087-00	3111-0087-00	3111-0031-00	3111-0083-00
12	Bushing - Grommet	3712-0004-00	3712-0004-00	3712-0004-00	3712-0004-00
13	Bushing - Cover	3712-0035-00	3712-0035-00	3712-0035-00	3712-0035-00
14	Air Line	3341-0007-00	3341-0005-00	3341-0002-00	3341-0004-00
15	Temperature Limit Control	2153-0003-00	2153-0003-00	2153-0001-00	2153-0001-00
16	Combustion Chamber	2152-0019-00	2152-0013-00	2152-0002-00	2152-0008-00
17	Burner Head Assembly	2152-0020-00	2152-0016-00	2152-0006-00	2152-0009-00
17-1	Nozzle	FA1001	FA1002	FA1003	FA1004
17-2	Nozzle Seal Washer	-----	-----	4349-0016-00	4349-0016-00
17-3	Nozzle Seal Spring	-----	-----	3431-0010-00	3431-0010-00
17-4	Nozzle Sleeve	-----	-----	3311-0002-00	3311-0002-00
17-5	Burner Head	3531-0010-00	3531-0010-00	3531-0007-00	3531-0009-00
17-6	Nipple	3541-0039-00	3541-0039-00	3541-0020-00	3541-0020-00
17-7	Spark Plug	FA1008	FA1008	FA1009	FA1009
17-8	Fiber Washer	4349-0017-00	4349-0017-00	4349-0017-00	4349-0017-00
17-9	Spring Washer	4342-0009-00	4342-0009-00	4342-0009-00	4342-0009-00
17-10	Flange Bolt	4329-0013-00	4329-0013-00	4329-0013-00	4329-0013-00
18	Fuel Line	3341-0009-00	3341-0009-00	3341-0008-00	3341-0008-00
19	Photocell Assembly	FA1007	FA1007	FA1007	FA1007
20	Photocell Bracket	3131-0244-00	3131-0159-00	3131-0159-00	3131-0159-00
21	Screw(BH1)	4311-0068-00	4311-0068-00	4311-0068-00	4311-0068-00
22	Motor and Pump Assembly	2154-0008-00	2154-0008-00	2154-0002-00	2154-0006-00
22-1	Motor	3970-0034-00	3970-0034-00	3970-0029-00	3970-0033-00
22-2	Motor Supportor	3121-0189-00	3121-0189-00	3121-0150-00	3121-0150-00
22-3	Pump Body	3541-0022-00	3541-0022-00	3541-0022-00	3541-0022-00
22-4	Bolt(PH)	4321-0038-00	4321-0038-00	4321-0038-00	4321-0038-00
22-5	Insert	See 22-6	See 22-6	See 22-6	See 22-6

NEVER LEAVE THE HEATER
UNATTENDED WHILE BURNING!

KEY NO.	DESCRIPTION	PART NO.			
		RMC-KFA45T	**RMC-KFA65T**	**RMC-KFA120T**	**RMC-KFA170T**
22-6	Rotor Kit	FA1000	FA1000	FA1000	FA1000
22-7	Blade	See 22-6	See 22-6	See 22-6	See 22-6
22-8	End Pump Cover	3531-0008-00	3531-0008-00	3531-0008-00	3531-0008-00
22-9	Nipple	3541-0039-00	3541-0039-00	3541-0020-00	3541-0020-00
22-10	Flange Bolt	4329-0014-00	4329-0014-00	4329-0014-00	4329-0014-00
22-11	Filter Kit	FA1005	FA1005	FA1005	FA1005
22-12	Lint Filter	See 22-11	See 22-11	See 22-11	See 22-11
22-13	OutPut Filter	See 22-11	See 22-11	See 22-11	See 22-11
22-14	End Filter Cover	3221-0029-00	3221-0029-00	3221-0029-00	3221-0029-00
22-15	Flange Bolt	4329-0016-00	4329-0016-00	4329-0016-00	4329-0016-00
22-16	Plug / Pump Adj. Kit	FA1006	FA1006	FA1006	FA1006
22-17	Ball	See 22-16	See 22-16	See 22-16	See 22-16
22-18	Spring	See 22-16	See 22-16	See 22-16	See 22-16
22-19	Adj. Screw	See 22-16	See 22-16	See 22-16	See 22-16
23	Ignitor	39E0-0080-00	39E0-0008-00	39E0-0005-00	39E0-0007-00
24	Screw(TH2S)	-----	-----	4312-0043-00	4312-0043-00
25	Fan Assembly	2154-0010-00	2154-0009-00	2154-0004-00	2154-0007-00
26	Main P.C.B Asseembly	215A-0015-00	215A-0015-00	215A-0015-00	215A-0015-00
26-1	Fuse	FA1017	FA1017	FA1017	FA1017
27	Screw(TH2S)	4312-0044-00	4312-0044-00	4312-0044-00	4312-0044-00
28	Side Cover R	3121-0264-03	3121-0264-04	3121-0263-01	3121-0180-00
29	Side Cover L	3121-0190-00	3121-0190-00	3121-0165-00	3121-0181-00
30	Fan Guard	3221-0035-00	3221-0035-00	3221-0032-00	3221-0032-00
31	Clip Nut	3131-0182-00	3131-0182-00	3131-0182-00	3131-0182-00
32	Upper Shell	3111-0088-00	3111-0088-00	3111-0032-00	3111-0084-00
33	Flange Screw	4319-0015-00	4319-0015-00	4319-0015-00	4319-0015-00

ACCESSORIES

Air Pressure Gauge	FA1010 (all models)
Thermostat	FA1012 (all models)

FOR TECHNICAL ASSISTANCE SEE YOUR LOCAL RETAILER OR CONTACT US AT:

Phone: 1-800-527-4948

NEVER LEAVE THE HEATER
UNATTENDED WHILE BURNING!

14. PARTS LIST (RMC-KFA 210T Model Only)

KEY No.	DESCRIPTION	PART No. RMC-KFA210T
1	Fuel Tank Assembly	2151-0001-00
2	Fuel Guage	2156-0001-00
3	Fuel Filter Assembly	2155-0001-00
4	Fuel Cap	2151-0003-00
5	Power Cord	3980-0031-00
6	Cord Bushing	3712-0011-00
7	Power Switch	39A0-0044-00
8	Display P.C.B Assembly	215A-0005-00
9	Button Support	3713-0045-00
10	Thermostat Control Knob	3231-0072-00
11	Lower - Shell	3111-0123-00
12	Bushing - Grommet	3712-0004-00
13	Bushing - Cover	3712-0035-00
14	Fuel Valve Assembly	2154-0015-00
14-1	Solenoid Valve	39A0-0055-00
14-2	Nipple	3541-0020-00
14-3	Elbow	3231-0093-00
14-4	Bracket - Valve	3131--0288-00
14-5	Bolt (PH)	4321-0020-00
15	Air Line	3341-0010-00
16	Temperature Limit Control	2153-0005-00
17	Combustion Chamber	2152-0029-00
18	Burner Head Assembly	2152-0031-00
18-1	Bracket - Burner	3121-0256-00
18-2	Adaptor - Nozzle	3131-0287-00
18-3	Nipple	3541-0020-00
18-4	Nozzle	FA1011
18-5	Nozzle Seal Washer	4349-0016-00
18-6	Nozzle Seal Spring	3431-0010-00
18-7	Nozzle Sleeve	3311-0002-00
18-8	Bracket - Spark	3131-0286-00
18-9	Spark - Plug	FA1021
18-10	Flange Bolt	4329-0013-00
18-11	Spring Washer	4342-0009-00
18-12	Fiber Washer	4349-0017-00
18-13	Ring - Retaining	4346-0027-00
19	Fuel Line	3341-0011-00
20	Photocell Assembly	FA1007
21	Photocell Bracket	3131-0159-00
22	Screw (BH1)	4311-0068-00
23	Motor and Pump Assembly	2154-0014-00

NEVER LEAVE THE HEATER
UNATTENDED WHILE BURNING!

KEY No.	DESCRIPTION	PART No.
		RMC-KFA210T
23-1	Motor	3970-0060-00
23-2	Motor Supportor	3121-0258-00
23-3	Bracket ignitor	3121-0257-00
23-4	Body - Pump	3541-0050-00
23-5	Bolt (PH)	4321-0180-00
23-6	Insert	See 23-7
23-7	Rotor Kit	FA1022
23-8	Blade	See 23-7
23-9	End Pump Cover	3531-0008-00
23-10	Flange Bolt	4329-0016-00
23-11	Filter Kit	FA1005
23-12	Lint Filter	See 23-11
23-13	Output Filter	See 23-11
23-14	Elbow	3231-0093-00
23-15	End Filter Cover	3221-0029-00
23-16	Flange Bolt	4329-0016-00
23-17	Plug / Pump Adj. Kit	FA1006
23-18	Ball	See 23-17
23-19	Spring	See 23-17
23-20	Adj. Screw	See 23-17
24	Ignitor	39E0-0014-00
25	Screw (TH2S)	4312-0043-00
26	Fan Assembly	2154-0007-00
27	Main P. C. B Assembly	215A-0020-00
27-1	Fuse	FA1017
28	Screw(TH2S)	4312-0044-00
29	Slde Cover R	3121-0259-00
30	Side Cover L	3121-0181-00
31	Fan Guard	3561-0053-00
32	Bushing - Fan Guard	3351-0010-00
33	Clip Nut	3131-0182-00
34	Upper Shell	3111-0084-00
35	Frange Screw	4319-0015-00

ACCESSORIES

Air Pressure Gauge	FA1010 (all models)
Thermostat	FA1012 (all models)

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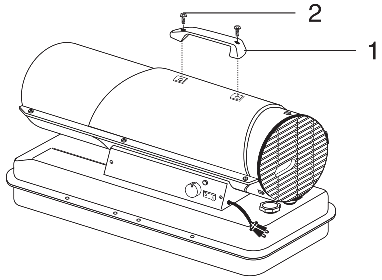
Phone: 1-800-527-4948

NEVER LEAVE THE HEATER UNATTENDED WHILE BURNING!

14. PARTS LIST (WHEELS AND HANDLE)

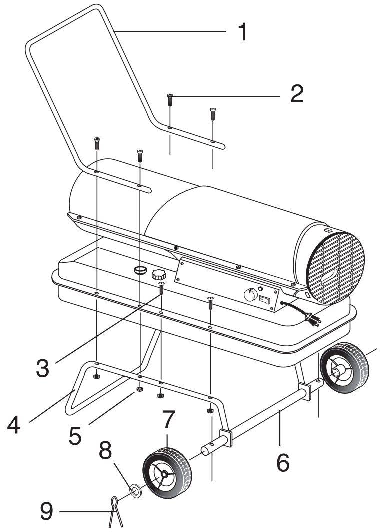
1) RMC-KFA45T/65T MODELS

KEY NO.	DESCRIPTION	PART NO.		QTY
		RMC-KFA45T	**RMC-KFA65T**	
1	Handle	3231-0073-00	3231-0073-00	1
2	Screw	4319-0015-00	4319-0015-00	2



2) RMC-KFA120T/170T/210T MODEL

KEY NO.	DESCRIPTION	PART NO.			QTY
		MC-KFA120T	**MC-KFA170T**	**MC-KFA210T**	
1	Handle	3551-0023-00	3551-0022-00	3551-0022-00	1
2	Screw(L)	4321-0166-00	4321-0166-00	4321-0166-00	4
3	Screw(S)	4321-0167-00	4321-0167-00	4321-0167-00	4
4	Wheel Support Frame	3551-0014-00	3551-0020-00	3551-0020-00	1
5	NUT	4331-0031-00	4331-0031-00	4331-0031-00	8
6	Axle	3541-0026-00	3541-0034-00	3541-0034-00	1
7	Wheel	2156-0003-00	2156-0003-00	2156-0003-00	2
8	Flat Washer	4341-0010-00	4341-0010-00	4341-0010-00	2
9	Split Pin	4353-0002-00	4353-0002-00	4353-0002-00	2



4221-0059-00
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